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Acute Coronary Syndromes

OBESITY PARADOX AMONG SURVIVORS OF ACUTE MYOCARDIAL INFARCTION AND ITS INTERACTION WITH TIME

Poster Contributions
Poster Hall B1
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Session Title: Epidemiology of ACS Events: Of Comorbidity and Long Term Trends
Abstract Category: 2. Acute Coronary Syndromes: Clinical
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Background: Obese patients are known to have a lower 1-year mortality after AMI compared to normal weight patients. However, it is unknown whether this obesity paradox persists over time. As metabolic abnormalities in the obese may take longer to display their effects, disparities in outcome may manifest later than 1 year.

Methods: Using data from 2 multicenter US registries of 6,346 patients hospitalized with AMI, we divided patients into 4 BMI groups (kg/m2): normal, BMI 18.5-24.9 (n=1,441); overweight, BMI 25-29.9 (2,307); obese, BMI 30-34.9 (1,534); and morbidly obese, BMI ≥ 35 (1,064). Mortality was compared using Cox regression, adjusted for GRACE score, and the interaction of BMI*follow-up time was tested.

Results: Compared with normal weight patients, obese and morbidly obese patients were younger but had more comorbidities, including hypertension and diabetes. At 7 yrs, higher BMI patients continued to have lower mortality rates (normal: 34.1%; overweight: 24.8%; obese: 20.4%; morbidly obese: 22.1%; p<0.001; Figure). These trends persisted after adjustment for GRACE score (REF: normal; overweight: HR 0.88, 95% CI 0.76-1.02; obese: HR 0.81, 95% CI 0.69-0.96; morbid obese: HR 0.84, 95% CI 0.69-1.01). There was no interaction between BMI and time (p=0.96).

Conclusion: Despite the metabolic abnormalities associated with obesity, the association of obesity with lower mortality after AMI persisted over 7-year follow-up. Further work is needed to understand the mechanisms of this obesity paradox.